

**Notice of Allowability**

Application No.

09/758,610

Examiner

Karla Moore

Applicant(s)

PAS, SYLVIA H.

Art Unit

1763

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 3/2/04.
2. ☒ The allowed claim(s) is/are 1-13.
3. ☒ The drawings filed on 11 January 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
  - \* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments in a paper filed 3/2/04, have been fully considered and are persuasive. The rejection of claims 1-13 has been withdrawn. Examiner has been persuaded that the cited art would not necessarily be capable of providing a vaporous solution as claimed. All other arguments are rendered mute based on this finding.
2. With respect to paragraph two of the previous office action, Examiner apologizes for any confusion. The paragraph was cited in error. As pointed out by Applicant, the present application has a single inventor.

### *Allowable Subject Matter*

3. Claims 1-13 are allowed.
4. The following is an examiner's statement of reasons for allowance:
5. The prior art of record fails to fairly teach or suggest an integrated oxide removal and processing system, comprising: a process module operable to intentionally add at least one film layer to a single semiconductor wafer; and **a transfer chamber module** coupled to the process module, the transfer chamber module used to align the semiconductor wafer for the process module, the transfer chamber module operable to expose the semiconductor wafer to a vaporous solution, the vaporous solution substantially inert with respect to the semiconductor wafer and operable to remove an interfacial oxide layer therefrom prior to or after the intentional addition of the at least one (claim 1). The prior art for record further fails to teach or fairly suggest an integrated oxide removal and transfer chamber, comprising: **a chamber operable to hold and align a single wafer** for presentation to a process module; a wafer support enclosed within the chamber; **and a plurality of outlets operable to discharge an amount of vaporous solution** into the chamber, the vaporous solution substantially inert with respect to the wafer support and the semiconductor wafer and operable to remove an oxide layer from at least one surface of the semiconductor wafer (claim 8).

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6. U.S. Patent No. 5,303,671 to Kondo et al. is the closest piece of prior art. However, unlike the presently claimed invention Kondo et al. fails to fairly teach or suggest "a transfer chamber module". Kondo et al. disclose a transfer mechanism comprising three transfer chamber modules (200, 300 and 400). The set of transfer chamber modules are capable of performing similar to the claimed invention, but only in tandem. None of the modules alone comprises all the recited limitations of the claimed invention of claim 1. With respect to claim 8, again, Kondo et al. is the closest piece of prior art. However, as noted previously, Kondo et al. fails to disclose a single chamber module structured as recited. In addition, Kondo et al. fail to teach a plurality of outlets operable to discharge an amount of a vaporous solution into the chamber. In Kondo et al., only one outlet is provided and instead of supplying an already vaporous solution, the solution is created within the chamber.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Otsuki et al. discloses a processing chamber capable of supplying a vaporous solution as claimed, but not a transfer chamber. The Japanese Patent to Kondo et al. discloses a similar invention to the one described above in the "Reasons for Allowance".

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karla Moore whose telephone number is 571.272.1440. The examiner can normally be reached on Monday-Friday, 8:30am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Mills can be reached on 571.272.1439. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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5 May 2004

*P. Hassanzadeh*  
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Primary Examiner  
Art Unit 1763